dusky, except the finlets which were yellow more or less margined with black. Anal and its finlets greyish silver. Caudal dusky more or less overlaid with grayish silver at base. Ventrals greyish silver outside, blackish inside.

The stomach of this fish, by the way, was crowded with some fifty individuals of a small herring about 4 inches long, and also contained one longer, slenderer halfbeak (known to the fishermen as "skipjack") and one small squid.

This was, of course, a small individual of the great Tunny. Its colors were probably not unlike those of larger fish. In July, 1918, one 6 or 7 feet long, which would have weighed perhaps 500 pounds, was examined by the writer while being shipped to the New York market from Long Island. Its faded colors, according to notes made at the time, were as follows: "Snout to caudal dark steel-grey, almost black. Gill covers and belly dull purplish silvery. Flanks green grey with obscure oval pale linear spots and rings, 1/4 to 1 1/2 inches long. Iris luminous blue-green silver. Spinous dorsal blackish. Soft dorsal and caudal dusky. Dorsal finlets orange yellow edged with black in front and behind. Anal finlets the same, but black edging very narrow and posterior only. Pectoral and ventral black above and dark grey silver below."—J. T. NICHOLS, *New York, N. Y.*

SOME AMPHIBIANS AND REPTILES FROM BRITISH COLUMBIA

During the summers of 1918, 1920 and 1921, Mr. Harlan I. Smith, Dominion Archæologist, kindly sent me from British Columbia the amphibians and reptiles here listed, and also supplied the annotations relating to habitats.

Clinton, B. C., with an annual rainfall of about 6 inches, is located in irrigated, sagebrush country. Meadow Lake is on a jack pine plateau about 20 miles north of Clinton. Watson Lake is similarly located about 45 miles north of Clinton. The vicinity

of Bella Coola and Hagensborg, B. C., just above tide, with a precipitation of 41 inches, is heavily timbered country surrounded by eternally snow-capped mountains, the glaciers of which help to feed the rivers and streams. The residents of Bella Coola say there are no frogs there. Atnarko, 57 miles east of Bella Coola, has so light a rainfall that some of the settlers find it advisable to irrigate.

The discovery of *Thamnophis sirtalis concinnus* and *T. ordinoides ordinoides* herein noted extends the previously recorded ranges a considerable distance north.

Notophthalmus torosus. Specimens were taken at Bella Coola, Hagensborg, and Ocean Falls. June 10, two specimens were found in a "pool on a low rock point," July 16, three were "taken from a slow-flowing, clear, mud-bottom stream about 8 inches deep which contained some vegetation," and Sept. 7, ten specimens, the longest 7.75 inches, were "taken under rotting logs near a slow-flowing stream." Apparently this species resembles *N. v. viridescens* in its seasonal choice of habitat.

Ambystoma macrodactylum. A total of five specimens was found under boards or logs in moist situations at Watson Lake, Clinton, Bella Coola, and Hagensborg. The longest specimen measures 5.10 inches. Following is a color description of a 4.55 inch specimen taken at Watson Lake, Sept. 28, 1918. Ground color very dark chocolate brown on sides, slightly lighter on feet, throat, chest and lower surface of tail. Dorsal surface, from muzzle to end of tail, greenish-yellow. This yellow and the brown ground color are about equally present on the muzzle in a spotted arrangement. Entire upper surface of head is yellow, spotted with nine angular areas of brown. The yellow narrows on the shoulders and pelvis, but on the back and tail it has the appearance of paint which has been poured along the vertebral line and allowed to run downward entirely surrounding parts of the ground color, thus forming angular spots, and nearly surrounding others which extend upward into the yel-

low. There are a few angular yellow spots on the sides. The yellow is crossed by the ground color at two places near the end of the tail. The upper surfaces of the legs and feet are spotted with yellow. The feet, the lower sides, and all under surfaces excepting that of the tail are profusely specked with white. The under surface of the tail is slightly specked with white. Other specimens show variation by having elongated areas of the ground color present along the vertebral line.

Ambystoma paroticum. Thirteen adult forms, the largest measuring 7.25 inches, were taken under rotting logs adjacent to water at Bella Coola and Hagensborg, and larval forms in "flood puddles" at Bella Coola. Larval specimens taken June 10, measure 44 mm. and have the dorsal dermal border extending to the base of the skull. Specimens taken Aug. 10, measuring 63 mm. have lost the dermal border and the gill, only the gill scars remaining.

June 27, several egg masses possibly of this species were discovered "in a cold, seeping glacial stream" at Bella Coola. These masses, about 60 mm. in diameter and one of which contained 87 eggs, "were attached to submerged weed stems and distributed over an area of about a square yard." The eggs had a pale greenish tint while the surrounding gelatinous mass was clear. On the date of discovery the development of the embryos was well advanced.

Bufo boreas boreas. Specimens were taken at Watson Lake, Meadow Lake, Clinton, Bella Coola, and Namu. This species was particularly abundant at Bella Coola. July 10, 27 mm. larval specimens were taken in a "flood puddle" at Bella Coola. Aug. 20, "thousands" of young specimens were observed, in some cases piled inches deep, on a muddy, log strewn flat. The Watson Lake specimens were collected "not more than half a mile from water." A great variation in color and color pattern is found among the 51 adult forms in this collection. The greatest number

might be described as follows: Ground color of head, back, and upper surface of legs, dark brown. Sides, vertebral line, and patch under eye, dull white. Warts on head and back, and warts and bars on legs, brown rimmed with black. Parotoids lighter brown. Warts at angle of jaw and majority of small warts on sides, reddish-brown. Lower sides blotched with black. All under parts dull white sparingly spotted with black on belly and legs. Soles of feet slaty-black, with large tubercles and tips of toes, dark brown. Small tubercles light brown. Warts on back show a tendency to run in longitudinal rows. Tibia with one large and one small parotoid-like wart located respectively in the central and the rear cross bars.

While stalking flies a 1.25 inch specimen twitched its hind toes, apparently with eagerness.

Rana cantabrigensis latiremis. The following is a color description of a specimen taken from a small stream flowing into Meadow Lake. Length, 1.80 inches. Hind legs to heel equals length of body forward to front of ear. Ground color of head, back, and upper surface of legs, light bronzy-brown. Spots over pelvis black and, excepting six near tail, have raised bronze centres. The two narrow, curved, bronze colored skin folds on upper back are intermittently edged with black on the outer sides. Lateral folds, red-bronze. Irregular line from eye across nostril to end of muzzle, black. Irregular line from end of muzzle to shoulder, bronzy-white edged on lower side with dark brown. Angular patch back of eye surrounding ear, black. Ear light bronze specked with black. Sides spotted and streaked with black. Lower sides bronzy-white spotted and vermiculated with black. Legs faintly barred and specked with black. Posterior surface of femur, greenish specked with black. Under parts, white specked with black. Front feet purplish-white on soles with lighter tubercles. Hind feet dark purplish-brown on soles, marked with longitudinal rows of bronze specks. Tubercles light.

Rana pretiosa pretiosa. Specimens were taken in small streams near Watson Lake, Meadow Lake, and Clinton. Following is a description of a 2.75 inch female specimen from Meadow Lake. Hind leg to heel equals length of body forward to ear. Skin everywhere rough. Lateral folds distinct. Ground color yellowish-brown on head, back, and upper surface of legs. Irregular roundish spots on head, back (including lateral folds), and front legs are black, and the majority have raised reddish-brown centres. Indistinct leg bars formed by black specks. Irregular black spot above each eye. Lateral folds, reddish-brown. Vertebral stripe, light yellowish-brown showing only on pelvis. Irregular line from eye across nostril to end of muzzle, black sprinkled with yellowish-brown. Reddish-cream streak from muzzle to arm, interrupted at end of jaw. Sides whitish, mottled with yellowish-brown. Throat white, mottled with salmon-red. Belly white, marked with salmon-red in shape of thick U. Legs salmon-red on lower surface. Feet salmon-red on inner half (hidden when sitting). Soles of feet, purplish-brown with lighter tubercles. Of five specimens 1.15 inch in length, only one shows slight traces of salmon-red on lower surfaces of femur, all other under surfaces being immaculate white.

While endeavoring to escape from the hand, a young specimen 1.45 inch in length opened the mouth and emitted squeaks resembling those made by a mouse.

Thamnophis sirtalis concinnus. Specimens were collected at Bella Coola, where members of this species were frequently observed sunning themselves among driftwood into which they retreated when disturbed. Enroute to Ottawa a 38 inch individual shipped from Bella Coola, Aug. 21, gave birth to 18 young which averaged 9.50 inches. They were marked with pale orange instead of the red of the adult, and were all very alike in color and color-pattern. On the right side of this female the labial formula is 7-10 and on the

left 8-10. Of her eighteen offspring, thirteen have 7-10 formulas on both sides; two have 7-10 formulas on the right and 8-10 on the left, thus duplicating the parent; two have 6-10 formluas on the right and 7-10 on the left, in which cases the area on the right side which corresponds to the seventh supralabial on the left is divided into unequal sections, the upper being about three times greater. The remaining specimen has a 7-9 formula on the right side and a 6-10 on the left where again the area adjoining the sixth supralabial is unequally divided, and on the lower jaw the area covered by the first, second and third infralabials on the left side is equal to that covered by the first and second on the right side, thus on the right side one of the first three infralabials is eliminated.

Four other specimens taken at Bella Coola have labial formulas of 8-10 right, 8-11 left; 8-9 right, 7-9 left; 7-10 right, 7-9 left; and 8-10.

Thamnophis ordinoides ordinoides. A 31 inch specimen was taken at Atnarko, B. C., Aug. 27, 1921. This and several other specimens were observed within a few feet of water.—CLYDE L, PATCH, *Ottawa, Canada.*

MILK SNAKE AND RED-BELLIED SNAKE

About six o'clock last evening, July 26, 1922, Robert Seeley, one of our camp boys, captured a small milk snake, *Lampropeltis triangulum triangulum* and brought it to me to examine. Some of the camp boys gathered around and while we were looking at the snake, it opened its mouth and began to eject something which we soon saw was another snake. It came out tail first which without doubt means that it was swallowed head first. This snake is known to our boys as the red-bellied brown snake, *Storeria occipitomaculata.* It was dead and judging from appearances had been in the milk snake's stomach several hours. The two snakes were